CLAYTONE SIKASOTE

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RESEARCH INTEREST

I'm interested in speech and language processing. In particular, I am enthusiastic about building efficient and robust speech recognition systems in low-resource and multilingual settings. I'm also interested in understanding the intricacies of human-machine interactions towards building intelligent multimodal dialogue systems. Presently, I'm focussed on building speech data resources for Zambian languages.

EDUCATION

MSc., Machine Intelligence, Africa Institute of Mathematical Sciences (AIMS), Kigali, Rwanda Oct 2019 - Mar 2021

- Recipient of the Google and Meta (formerly Facebook) full scholarship to pursue the African Masters of Machine Intelligence programme at the Africa Institute of Mathematical Sciences (AIMS) in Kigali, Rwanda.
- Supervisor: Prof. Antonios Anastasopoulos
- Date of completion: **31/03/2021**
- Comment: completed (both course work and research project) just waiting for official results.

MSc., Information Technology Management, Binary University, Puchong, Malaysia

Apr 2013 - Oct 2014

• Specialization: Information Technology

BSc., Computer Science, University of Zambia, Lusaka, Zambia

Apr 2007 – Aug 2011

• Specialization: Computer Systems Engineering

TEACHING EXPERIENCE

Lecturer, Department of Computer Science, University of Zambia, Zambia

May 2015 - Present

• Undergraduate Computer Science courses:

CSC 2702 - Databases and Information System, University of Zambia	2021/2022
CSC 3712 - Advanced Databases, University of Zambia	2021/2022
CSC 4792 - Introduction To Data Mining, University of Zambia	2021/2022

Instructor, CISCO Academy, University of Zambia, Zambia

Sep 2016 – Jun 2019

 Instructor of Python Programming, IT Essentials and Cisco Certified Network Associate (CCNA) Level 1 and Level 2 CISCO courses.

Teaching Assistant, Department of Computer Science, University of Zambia, Zambia

Feb 2012 – May 2015

• Teaching assistant for Introduction to Databases course in the Department of Computer Science under the Staff Development Fellowship.

PERSONAL DEVELOPMENT

• Mathematics for Machine Learning Specialization by Imperial College London on Coursera Nov 2019
Certificate of completion

• Deep Learning Specialization by Deeplearningai on Coursera

Certificate of completion

Aug 2018

• Machine Learning by Stanford University on Coursera
Certificate of completion

Jul 2018

PUBLICATIONS

• C. Sikasote, A. Anastasopoulos, BembaSpeech: A Speech Recognition Corpus for the Bemba Language, Proceedings of the Language and Resource Evaluation Conference(LREC), 2022.

• S. H. Chiwamba, J. Phiri, P. O.Y. Nkunika, C. Sikasote, M. M. Kabemba, M. N. Moonga, Automated Fall Armyworm (Spodoptera frugiperda, J.E. Smith) Pheromone Trap Based on Machine Learning, Journal of Computer Science 2019, 15 (12): 1759.1779

SCHOLARSHIPS AND AWARDS

• African Master of Machine Intelligence Scholarship, Kigali, Rwanda	Sep 2019
• Special Research Fellowship, University of Zambia, Lusaka, Zambia	Sep 2019
• Binary University Scholarship, Binary University, Malaysia	Apr 2013
• Staff Development Fellowship, University of Zambia, Lusaka, Zambia	Feb 2012
• Zambia Higher Education Scholarship, University of Zambia, Lusaka, Zambia	Apr 2007

GRANTS

• Lead Researcher/Co-PI, Multimodal Datasets for the Bemba Language Project

Apr 2021 - Aug 2022

TECHNICAL SKILLS

• Programming Languages: Python

• Database technologies: MS SQL, MySQL

• Operating System platforms: Windows, Linux

Machine Learning libraries: Scikit-learn, Pandas, NumPy, SciPy

• Data Visualization tools: Matplotlib, tSNE

• Deep Learning frameworks: Pytorch, Tensorflow

• Speech Recognition Tools: DeepSpeech, FairSeq

OPEN-SOURCE DATASETS

• Zambezi Voice: A multilingual speech corpus for Zambian languages containing speech recognition data resources for three languages of Zambia. [ON-GOING]

Link: https://github.com/unza-speech-lab/zambezi-voice

• BembaSpeech: ASR corpus consisting of 24 hrs of read speech for the Bemba language spoken by over 30% of the population in Zambia.

Link: https://github.com/csikasote/BembaSpeech

• Multimodal Dataset for the Bemba Language: Large scale multimodal dataset for the Bemba language containing multi-turn image-grounded dialogues amounting to over 180 hours of speech with corresponding Bemba transcriptions and translation in English. The project was funded by Lacuna Fund.

Link: https://github.com/csikasote/igc-mu-cibemba

• Multilingual ASR Corpus for African Languages: Multilingual speech corpus consisting of over 60 hours of read speech for 19 African languages. I contributed 2 hours of read speech for Bemba language.

 $\label{link:https://github.com/besacier/AMMIcourse/tree/master/STUDENTS-RETURN$

STUDENT SUPERVISION AND MENTORING

• Stanly Mwape, Undergraduate, University of Zambia	2021/2022
• Kalinda Siaminwe, Undergraduate, University of Zambia,	2021/2022
• Bangiwe Zulu, Undergraduate, University of Zambia	2021/2022
• Godfrey Mkandawire, Undergraduate, University of Zambia	2021/2022

COMMUNITY SERVICE

• Conference Volunteer

International Conference on Learning Representations (ICLR)
International Conference on Artificial Intelligence and Statistics (AISTATS)

Mar 2021